



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,064	06/21/2001	Jaap Andre Haitzma	NL 000349	6071
24737	7590	03/17/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			CHEN, SHIN HON	
			ART UNIT	PAPER NUMBER
			2131	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/886,064

**Applicant(s)**

HAITSMA ET AL.

**Examiner**

Shin-Hon Chen

**Art Unit**

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-10 have been examined.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter AAPA) in view of Davis et al. U.S. Pat. No. 6611607 (hereinafter Davis).

4. As per claim 1, 6, and 10, AAPA discloses a method of embedding a watermark in an information signal, comprising means for embedding said watermark in successive portions of the information signal (AAPA: page 1 lines 16-23). AAPA does not explicitly disclose embedding different versions of watermark and said versions being different with respect to a property which is irrelevant for detection of said watermark. However, Davis discloses different watermarks can be embedded into different frames using different transformations (Davis: column 6 lines 16-26: embedding watermark in different spatial and temporal portions and the change is irrelevant to the secret key or pseudorandom sequence noise of the detection algorithm used to subtract watermark on the image). It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to embed the watermark in different spatial and

Art Unit: 2131

temporal portions of the image because different watermarking method can be applied to data. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Davis within the system of AAPA because it increases security of data by using different watermarks on different portions of the information signal thus making it more difficult to analyze watermark patterns.

5. As per claim 5 and 9, AAPA as modified discloses a method as claimed in claim 1 and 6 respectively. AAPA as modified further discloses wherein said successive portions of the information signal are successive frames of a motion video signal (AAPA: page 1 lines 16-23).

6. Claims 2, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Davis and further in view of Liao et al. U.S. Pat. No. 6654479 (hereinafter Liao).

7. As per claim 2 and 7, AAPA as modified discloses a method as claimed in claims 1 and 6 respectively. AAPA as modified does not explicitly disclose comprising the step of randomizing magnitudes of the Fourier coefficients of said watermark. However, Liao discloses randomizing the coefficients to generate different watermarks (Liao: column 1 line 64 – column 2 line 6; Davis: column 6 lines 16-26: Fourier transformation and other transformations). It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to randomize the magnitude of coefficient of Fourier transformation to generate different watermarks to increase the complexity of watermarks. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings

Art Unit: 2131

of Liao within the combination of AAPA-Davis because generating different watermarks according to random numbers makes it more difficult to analyze the watermarking patterns.

8. As per claim 3, AAPA as modified discloses a method as claimed in claim 2. AAPA as modified further discloses wherein the watermark includes at least one basic watermark pattern being tiled over the portion of the information signal, said step of randomizing the magnitudes being applied to the Fourier coefficients of said basic watermark pattern (AAPA: page 1 lines 16-23: one watermark pattern tiled over the image; Liao: column 1 line 64 – column 2 line 6: change the magnitude of coefficient; Davis: column 6 lines 16-26: apply to Fourier transformation). Same rationale applies here as above in rejecting claim 2.

9. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Davis and further in view of Hayashi U.S. Pub. No. 20030161496 (hereinafter Hayashi).

10. As per claim 4 and 8, AAPA discloses a method as claimed in claim 1 and 6 respectively. AAPA as modified does not explicitly disclose the method comprising means for randomizing the position of the watermark with respect to the respective portion of the information signal. However, Hayashi discloses that limitation (Hayashi: [0143]-[0145]). It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Hayashi within the combination of AAPA-Davis because it improves secrecy of the embedded position of digital watermark information.

Art Unit: 2131

11. Applicant's arguments filed on 12/14/04 have been fully considered but they are not persuasive.

Regarding to claim 1, applicant argues that AAPA does not disclose embedding different versions of the watermark in every image and the versions are different with respect to a property that is irrelevant for detection of said watermark. However, the examiner is cited the Davis reference to discloses applying different versions of watermark that are irrelevant to the detection of said watermark. Therefore, applicant's argument is respectfully traversed.

Also regarding to claim 1, applicant argues that Davis reference discloses different watermark messages in different transform domains while the claim discloses different versions of the same watermark. However, the Davis reference is cited to disclose embedding watermark in different spatial and temporal portions of an image/data (Davis: column 6 lines 16-25). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to embed the same watermark in different spatial or temporal portions because it prevents hackers from subtracting watermark embedded in the message.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Murakami et al. U.S. Pat. 6826290 discloses image processor for digital watermark extractor, determines position at which watermark information is embedded in image data based on probability of image data positional information extraction at different locations.

Gustafson et al. U.S. Pat. No. 6442284 discloses watermark detection utilizing regions with higher probability of success.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

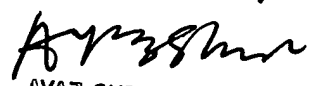
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2131

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shin-Hon Chen  
Examiner  
Art Unit 2131

SC

  
AYAZ SHEIKH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100